

Treating Invasive Weeds on the Upper Snake River Plain

Grant Completion Report for FY2012

Introduction

In FY2012 Camas National Wildlife Refuge (NWR) obtained a grant through the U.S. Fish and Wildlife Service (FWS) to map and treat invasive weeds not only Refuge lands, but adjacent lands as well. In 2010 Pheasants Forever Inc., acting as a conservation buyer purchased a 2,700 tract of land owned by the Joe Marty family. This acquisition allows Camas NWR (10,500 acres) to now be connected with Mud Lake State Wildlife Management Area (8,853 acres). This connection allows the State of Idaho and FWS the opportunity to manage a larger tract of wildlife habitat in coordination. Much of the Pheasants Forever Inc. tract had been abused by over grazing of cattle and horses. This has led to a serious invasion of Russian knapweed which has gained a strong hold on the landscape. Canada thistle, musk thistle, white top, black henbane and leafy spurge are also present on all three tracts. Funds from this grant helped implement three measures (mapping, biological controls and chemical) to control the invasive plants on all three properties.

Three main cooperating agencies have spent time and resources treating invasive species on this newly acquired land. These agencies or groups are: Idaho Fish and Game Department, USFWS, and the Continental Divide Weed Management Area group and its partners (for a complete list of partners see the partnership section of this document).

Budget

The budget was spent in the following ways:

\$4,007.18 salary for temporary mapping technician

\$7,190.00 purchase of two Trimble GPS units

\$4,980.00 for biological control agents

\$4,312.30 Herbicide purchase (Milestone, Telar and surfactant)

\$20,489.48 Total funds spent

Implementation

Our original budget included \$10,000 in labor for a seasonal employee. We had difficulty with the hiring process and we had to explore many avenues to find a candidate. In the end we were fortunate to get Jamie Kienzle to detail from Audubon NWR in North Dakota for six weeks to map invasive weeds. Jamie completed a total of 3,077 acres mapped, of which 1,360 acres were on the Pheasants Forever Inc. tract, with the rest (1,717 acres) on Refuge. These acres were mapped using a Trimble GPS coupled with Refuge Lands GIS (RLGIS). A map (Appendix A)

is attached to show the acres covered and the extent of the weed issues that exist. This map has already been used on the Pheasants Forever Inc. tract to prioritize an aerial application of Milestone that was completed in the fall of 2012.

We had sufficient funds to go ahead and purchase two new Trimble Geo XT units supported with Arc Pad and RLGIS software. These units will be valuable as we continue to map for invasive species on the Refuge and also mark and monitor treatments now and in the future.

All three tracts of land mentioned here have issues with Canada thistle growing in and around wetlands, water delivery ditches, tree plantings and roadsides. Trying to get equipment into some of these areas is very difficult and most of the effective herbicides cannot be applied at or near water. This limits the amount of tools we have to fight this plant. For the past three years the Refuge has conducted releases of biological control agents for Canada thistle in these areas. If we can sustain a healthy population of biological controls it will truly help in getting this plant under control. In FY 2012 24 releases of *litura* (Canada thistle stem mining weevil) were purchased through this grant and released on Camas NWR (12) and Mud Lake State (WMA) [12]. Also purchased with these grants funds were 10 releases of *horidus* (musk thistle rosette feeding weevil) and 22 releases of *rubiginosa* (thistle defoliating beetle). All 10 of these *horidus* releases were on the Refuge in the heaviest Musk thistle infestations. Unfortunately the 22 releases of *rubiginosa* could not be delivered for release. Due to the dry conditions these bugs never emerged in numbers large enough for collection to take place. Integrated Pest Management granted us a raincheck on this species and will deliver when they are available for collection. Appendix B and C are the maps showing the biological control release sites for 2012.

The biological control release on the Refuge also had monitoring sites (marked with GPS locations) established to measure the effectiveness of the release. The biological control agents were released into thick stands of invasive plants. A polygon was created using the Trimble unit of the weed stand, so the size can be measured over time to determine if the weed patch is increasing or decreasing in overall size. Photo points were also established at each site for a visual reference on the efficacy of the treatment.

Also purchased using funds from this grant was some herbicides to treat two plants in particular, Russian knapweed and white top (hoary cress). These two plants were chosen for targeting with these funds for different reasons. Russian knapweed is the biggest issue that we face with these three tracts of land. White top is found in relatively small patches and we have a chance of eliminating this plant in time if we are able to stay on top of it. Milestone herbicide was purchased because it is the most effective herbicide on Russian knapweed and gives the most bang for the buck in terms of treatment of this species. Telar herbicide was purchased because it was recommended as most effective on white top if sprayed with the proper timing. We will evaluate the effectiveness of Telar over time for our sites, using a similar technique as described for biological control monitoring mentioned above.

Five gallons of Milestone purchased through this grant was also made available for a cooperative spray day held on the Pheasants Forever Inc. tract. Participants of this event were all members of the Continental Divide Weed Management Area and included: Clark and Jefferson Counties, Idaho Department of Transportation, U.S. Forest Service, Idaho Fish and Game Department and the U.S. Fish and Wildlife Service. These cooperative effort utilized ATVs to incorporate spot treatment of invasive plants found within the treatment area. At least 54 acres of land were treated by 12 applicators during a 9 hour spray effort. Appendix D shows the general area of treatment completed during the 2012 spray day.

Partnership

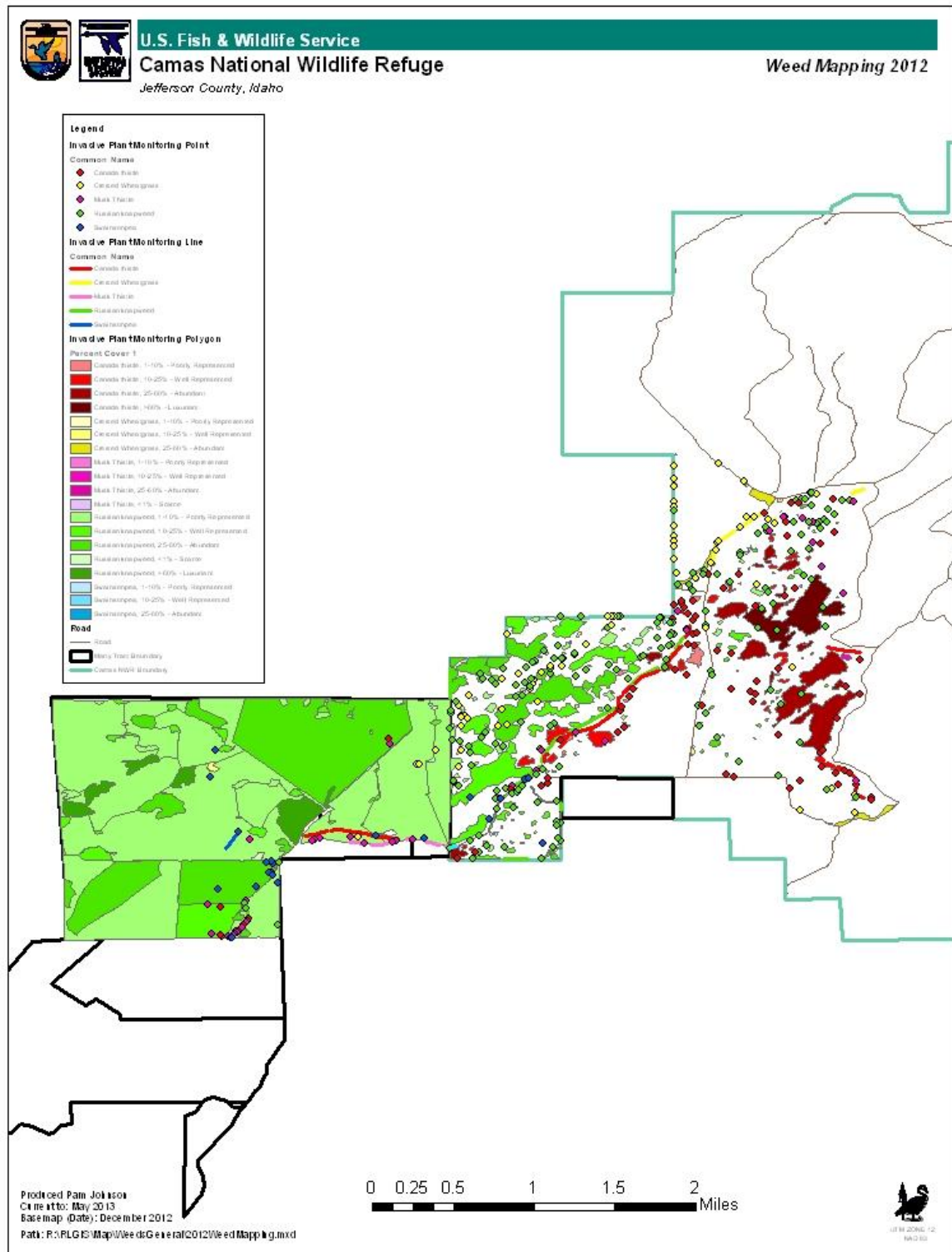
A big part of the grant application that was submitted was our partnerships that have been created for this tract of land. The following is a brief summary of the partners that we listed and their contribution in 2012.

Idaho Fish and Game Department is the agency that is currently trying to purchase the property now owned by Pheasant Forever Inc. and make it part of the Mud Lake WMA. The state manages the habitat in many ways throughout the year with various tools, such as mechanical means of weed control, restorations efforts, and herbicide applications along with the release of biological controls from time to time. As part of this effort the State has paid a spray plane for the third year in a row to get an effective means of control of Russian knapweed on such a large tract. In 2011 the state also had a seasonal employee working on mapping weed infestations on the Pheasants Forever Inc. tract and the Mud Lake WMA.

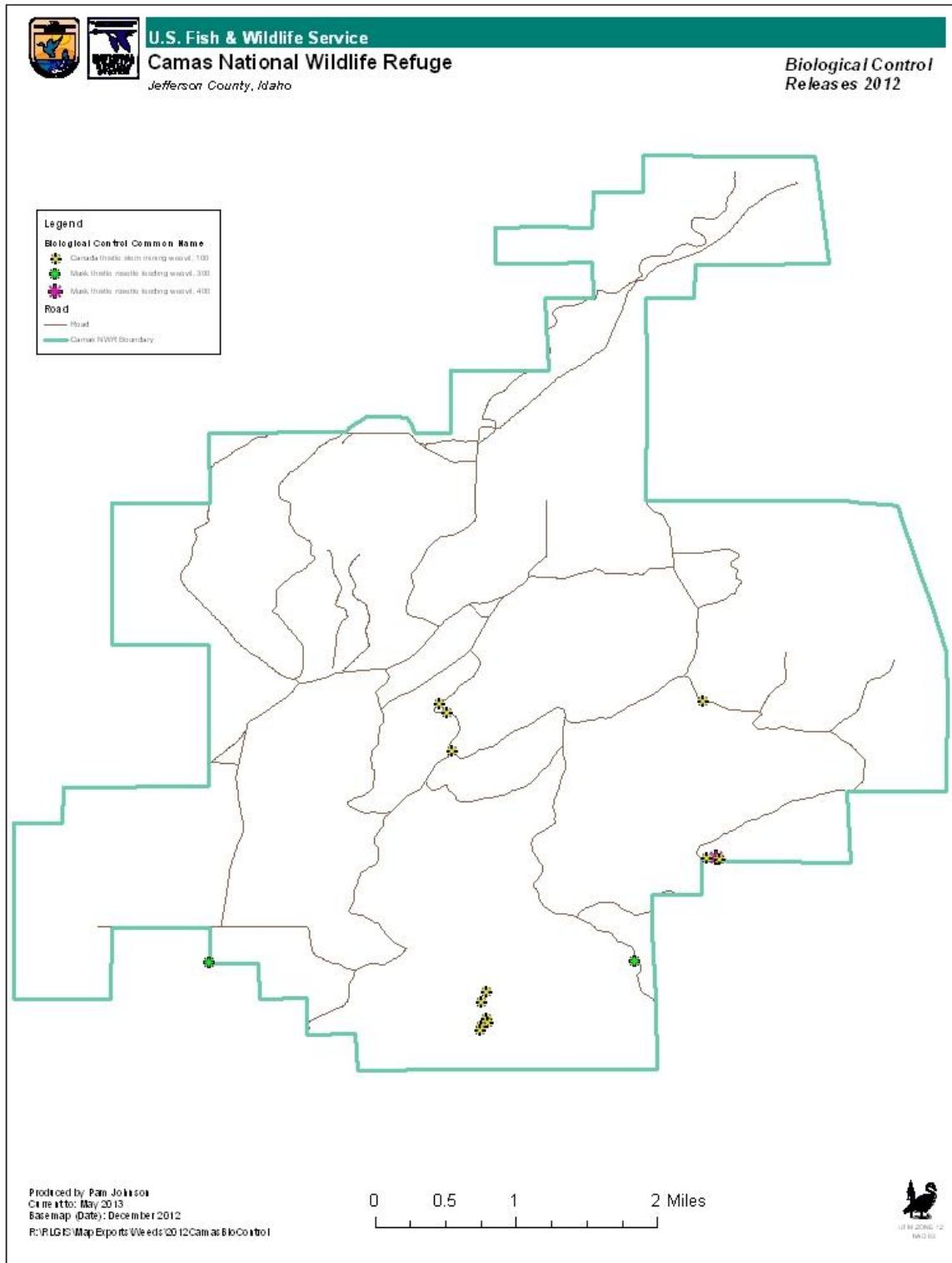
Continental Divide Weed Management Area is made up of multiple cooperating agencies within the local area to include: Clark and Jefferson Counties, U.S.D.A. Forest Service, Bureau of Land Management, Idaho Fish and Game Department, U.S. Fish and Wildlife Service and private landowners. All these partners have participated at some level in the spray days that have taken place on the Pheasants Forever, Inc. tract, Camas NWR or Mud Lake State Wildlife Management Area. Jefferson County had also worked in the past with the previous landowner of the Pheasants Forever, Inc. tract to establish some control of the weed issues on the property.

Pheasant Forever, Inc. without this organization purchasing this property from the private landowner this cooperative effort may not have been possible. The connection of these lands that are being managed for wildlife will be a benefit for a diverse suit of wildlife species for many years to come.

Appendix A



Appendix B



Appendix C



Appendix D

